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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,663	07/02/2003	Xiang Dai	200308566-1	5441
22879 7590 07/11/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER MITCHELL, JAMES M	
			ART UNIT 2813	PAPER NUMBER
			MAIL DATE 07/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/612,663	Applicant(s) DAI ET AL.	
	Examiner James M. Mitchell	Art Unit 2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8, 10, 13, 14, 21, 23, 25 and 28-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 10, 13, 14, 21, 23, 25, 32-35 is/are allowed.
- 6) ☒ Claim(s) 28 and 29 is/are rejected.
- 7) ☒ Claim(s) 30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to applicant's amendment filed April 23, 2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cromwell (U.S. 6,198,630).

Cromwell (e.g. Fig. 1A, 2D) discloses:

(cl. 28) an assembled electronic component system comprising: a printed circuit board (108); an integrated circuit package including a substrate (102) and a lid (118), the substrate including a solder column array directly connected to the printed circuit board 9Col. 7, Lines 33-36) and the lid (121) including an extended portion that extends

Art Unit: 2813

outwardly from the substrate over an edge of the substrate, the integrated circuit package including four corners; a plurality of supports (111) at the respective corners of the integrated circuit package, with each support comprising a pair of wing portions that are generally perpendicular to each other and joined together at one end to define a corner of the respective supports (e.g. perpendicular protrusions, not labeled), each wing portion of the respective supports extending underneath the extended portion of the lid of the integrated circuit package (e.g. Fig. 2C) between the lid and the printed circuit board, and each wing portion of the respective supports being sized and shaped to contact and vertically support the extended portion of the lid of the integrated circuit package ; a single band (110), sized and shaped to surround and contact all of the respective supports and apply a lateral force against the wing portions and the corners of the respective supports to removably secure the respective supports in position underneath the extended portion of lid of the integrated circuit package and to maintain the respective supports in position relative to the printed circuit board; a compressive force mechanism (e.g. 124,129) applying a compressive force on the integrated circuit package against the printed circuit board with the compressive force translated through both the solder column array and the wings of the respective supports via the extended portion of the lid of the integrated circuit package; and a heat sink (127) secured on top of the lid of the integrated circuit package;

(cl. 29) the electronic component system comprises a computer system (Abstract).

Cromwell discloses the claimed invention except that it does not disclose that its supports along with its band are separate and distinct from each other or that its heat sink is separate from and independent of the lid of the integrated circuit package.

However, the claim would have been obvious to one of ordinary skill in the art, since his invention is only making separable what was already known in the art. Moreover, applicant has not disclosed that the features produce unexpected results, are for an unobvious reason or otherwise critical. cf. In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965) (holding, among other reasons, "that the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice."); but see Schenck v. Nortron Corp., 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983) (held that the claims were patentable because the prior art perceived a need for mechanisms to dampen resonance, whereas the inventor eliminated the need for dampening via the one- piece gapless support structure, **showing insight that was contrary to the understandings and expectations of the art.**). (emphasis added)

Allowable Subject Matter

Claims 8,10,13,14,21,23,25 and 32-35 are allowed.

Claims 30 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of the objected subject matter: the prior art does not disclose or make obvious the wings having a size substantially

equal to a creep-induced height of the solder column array including all the limitations of the independent claims.

Response to Arguments

Applicant's arguments filed April 23, 2007 have been fully considered but they are not persuasive. Applicant notes in his response that the claimed invention was different than Cromwell, because the pending application did not produce a shield due to failure to seal the device. Examiner is unpersuaded, because applicant's broad claim is encompassed within the disclosure of Cromwell. The fact that Cromwell has identified additional benefits or advantages is irrelevant to the fact that it falls within the plain and ordinary meaning of applicant's claims. See e.g. *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999) ("[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer.")

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

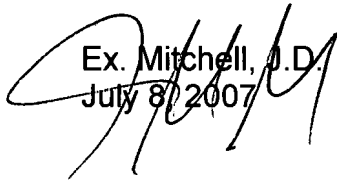
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Application/Control Number: 10/612,663
Art Unit: 2813

Page 7

Ex. Mitchell, J.D.
July 8/2007

A handwritten signature in black ink, appearing to be 'J.D. Mitchell', is written over the printed text 'Ex. Mitchell, J.D. July 8/2007'.